

Date: Wednesday, 4/5/2006 3:32:48 PM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : AFT TUBE ASSEMBLY
 Job Number : 26581
 Estimate Number : 10699
 P.O. Number : N/A Part Number : D3391025
 This Issue : 4/5/2006 S.O. No. : N/A Drawing Number : D3391 REV D
 Prsht Rev. : NC Project Number : N/A
 First Issue : N/A Type : LANDING GEAR Drawing Revision : D
 Previous Run : 26580 Material : N/A
 Written By : SEE IN COMMENT BELOW Due Date : 4/28/2006 Qty: 1 Um: Each
 Checked & Approved By : JF 06.04.06
 Comment : Est Rev B 06-02-07 ECN773 dwg rev. D EC
 Est Rev C 06-03-28 Update Manufacturing Instructions JLM

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D6014090 ALUMINUM EXTRUSION



Comment: Qty.: 1.0000 f(s)/Unit Total: 1.0000 f(s)

ALUMINUM EXTRUSION

Pick:

Qty Part Number Description Batch

1 D6014-090 Extrusion 24315

Identify as D3391-3 D6014-104

MB 06/04/20

2.0 MORI SEIKI MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

Turn as per Folio FA599 Rev: AA & Dwg D3391 Rev: D

BG 06.04.22

3.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

BG 06.04.22

4.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS

1-Machine as per Folio FA 599 Rev: D & Dwg D3391 Rev: D

2-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

3-Deburr

J.F 06/05/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
	11/10/03						
	11/10/03						

Part No: 1 PAR #: Fault Category: NCR: Yes No DQA: Date:

QA: N/C Closed: Date:

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/5/2006 3:32:48 PM
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Customer: CU-DAR001: Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 26581

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

J.F. 06/05/11 1

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

BG 06-05-31 1

7.0

BENDING

BENDING MACHINE



Comment: NC Bender

Form as per Dwg D3391 Using Bend Prog 3391025

DP06-6-5

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

BE 06-06-05

9.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill Tube as per D3391 using DT8809 (HOLES MARKED "A" ONLY)

3-Drill and c' sink wearshoe holes as per Dwg D3391 Using DT8878(Mid Tube) & DT8217 Wearplate Jig

4-C'sink holes for float bag (4 holes per side) as per Dwg D3391

5-Deburr

DP06-6-20

DP06-6-8

DP06-6-8

DP06-6-20

Tools: rill

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

BE 06-06-26

11.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

45 06 07 05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 26581

Part Number: D3391025

Job Number:



Seq. #:	Machine Or Operation:	Description :
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12.0	POWDER COATING	POWDER COATING
------	----------------	----------------



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

DL 06/07/15 (1)

13.0	QC3	INSPECT POWDER COAT/CHEMICAL CONVERSION
------	-----	---



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FC 06 07 15 (1)

14.0	AESS10KB366	INSERT
------	-------------	--------



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Insert

Pick:

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

14	AESS10KB366	Insert	
----	-------------	--------	--

M17905

15.0	NAS1330C3KB166	
------	----------------	--



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

INSERT

Pick:

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

8	NAS1330C3KB166	Insert	
---	----------------	--------	--

M100732

16.0	AESS10KB266	INSERT
------	-------------	--------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

INSERT

Pick:

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

2	AESS10KB266	Insert	
or NAS1330C3KB266			

M17905

17.0	AESS10KB316	INSERT
------	-------------	--------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

INSERT

Pick:

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

2	AESS10KB316	Insert	
or NAS1330C3KB316			

M17905

DL 06/07/15 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/5/2006 3:32:49 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 26581

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Aft Cap

Pick:

Qty	Part Number	Description	Batch
1	D2646	Aft Cap	B25381

19.0

AN3C4A

BOLT



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bolt

Pick:

Qty	Part Number	Description	Batch
2	AN3C4A	Bolt	M100651

20.0

AN960C10L

washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Inventory

Pick:

Qty	Part Number	Description	Batch
2	AN960C10L	Washer	M18822

21.0

NAS1515H3L

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

WASHER

Pick:

Qty	Part Number	Description	Batch
2	NAS1515H3L	Washer	M100186

DL 04/07/15 (1)

22.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Install inserts as per Dwg D3391

2-Install Aft Cap as per Dwg D3391

A/R Sikaflex-241/-291 M101193

Sikaflex expiry date: 4/06

DL 04/07/15 (1)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: SD Date: 4/6/25
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Drawing Name: AFT TUBE ASSEMBLY

Job Number: 26581

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

23.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

ML 06.07.18

(1)

24.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *—*

MP

25.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

06/07/25

Job Completion



06.07.24

Dart Aerospace Ltd

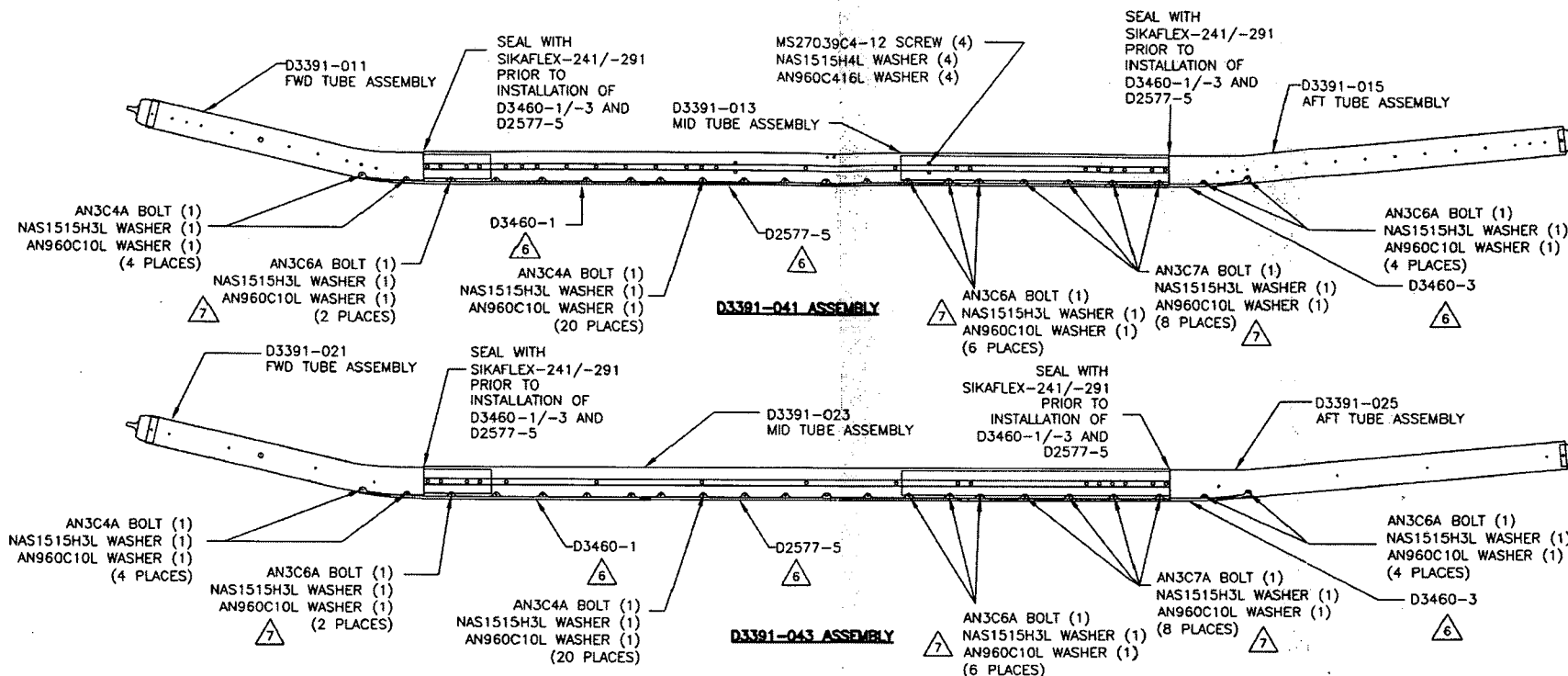
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY - 041	QTY - 043	PART NUMBER	DESCRIPTION
X	X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
		D3391-043	FLOAT SKIDTUBE ASSEMBLY
1		D3391-011	FWD TUBE ASSEMBLY
1		D3391-013	MID TUBE ASSEMBLY
1		D3391-015	AFT TUBE ASSEMBLY
	1	D3391-021	FWD TUBE ASSEMBLY
	1	D3391-023	MID TUBE ASSEMBLY
	1	D3391-025	AFT TUBE ASSEMBLY
24	24	AN3C4A	BOLT
12	12	AN3C6A	BOLT
8	8	AN3C7A	BOLT
44	44	NAS1515H3L	WASHER
44	44	AN960C10L	WASHER
4		MS27039C4-12	SCREW
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
1	1	D2577-5	WEARSHOE
1	1	D3460-1	WEARSHOE
1	1	D3460-3	WEARSHOE

GENERAL NOTES

- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL 'E' SIZE HOLES (Ø0.250-Ø0.257) FOR WEARSHOE INSERTS.
- C/SINK Ø0.391/Ø0.425 x 100" AS APPLICABLE AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- APPLY A LAYER OF SIKAFLEX -241/-291 ADHESIVE BETWEEN THE BOTTOM OF THE SKIDTUBE ASSEMBLY AND THE WEARPLATES
- DO NOT TORQUE, HAND TIGHTEN ONLY

△

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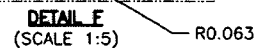
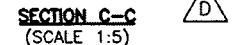
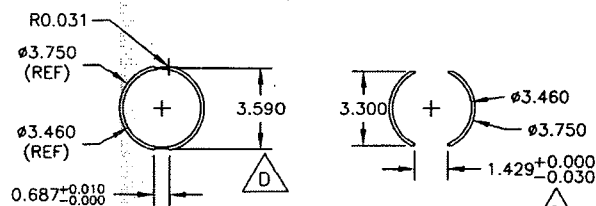
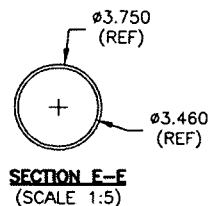
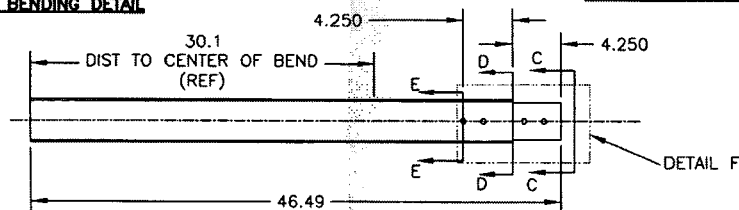
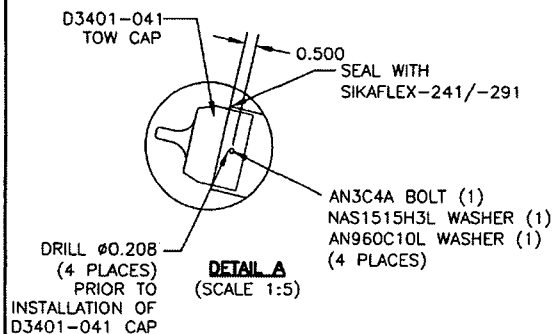
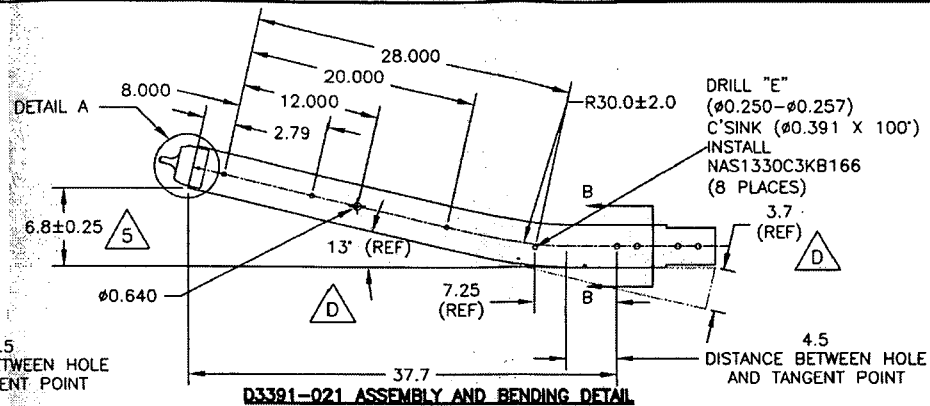
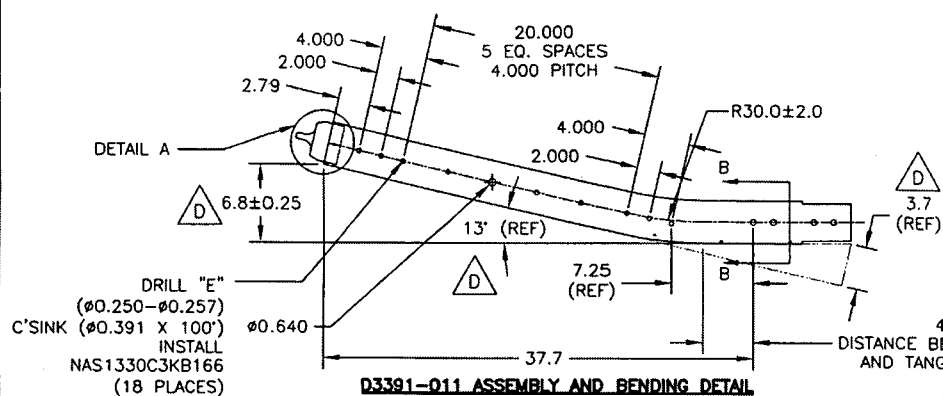
06-01-27

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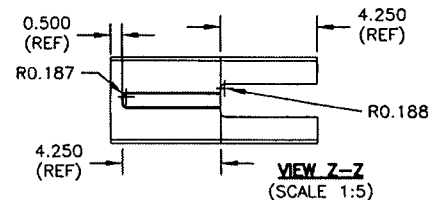
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DESIGN	D	06.01.23	UPDATE TOLERANCE, CHANGE HOLE SIZE
DRAWN BY	C	05.09.27	LENGTHEN AFT EXTENSION
CHECKED	B	05.06.10	DRAWING UPDATES
APPROVED	A	05.02.07	NEW ISSUE
DATE	06.01.23		
DRAWING NO.	D3391		
TITLE	412 FLOAT SKIDTUBE		
REV. D			
SHEET 1 OF 5			
SCALE			
NTS			

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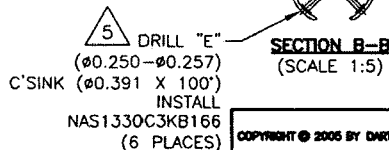


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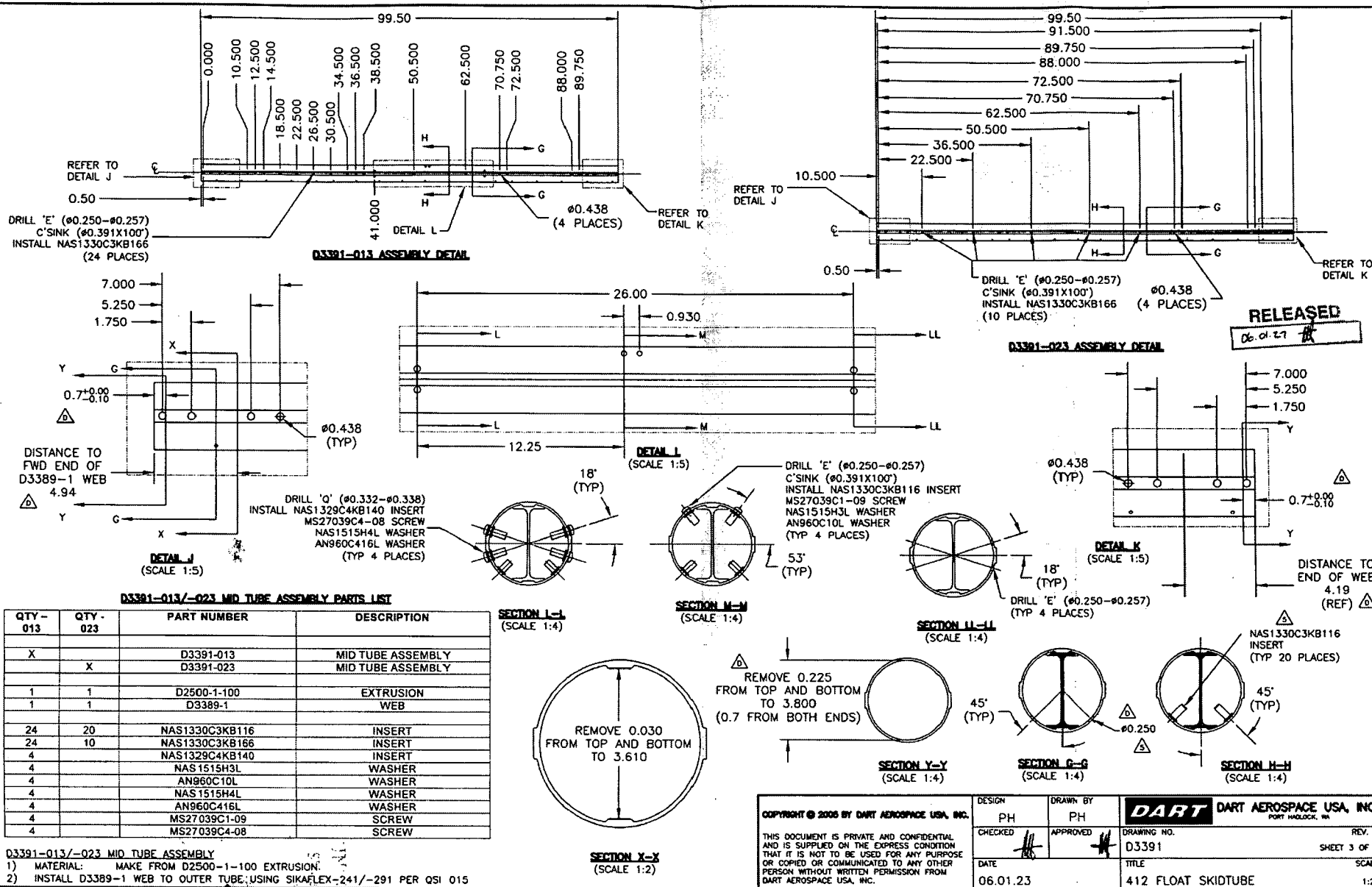
D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
4	4	AN3C4A	BOLT
4	4	NAS1515H3L	WASHER
4	4	AN960C10L	WASHER
24	14	NAS1330C3KB166	INSERT



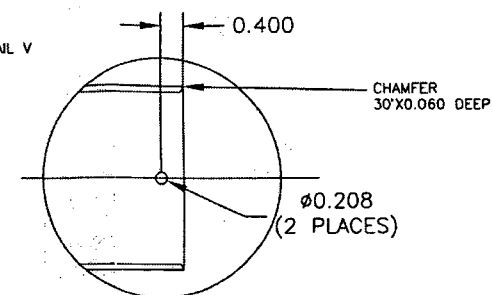
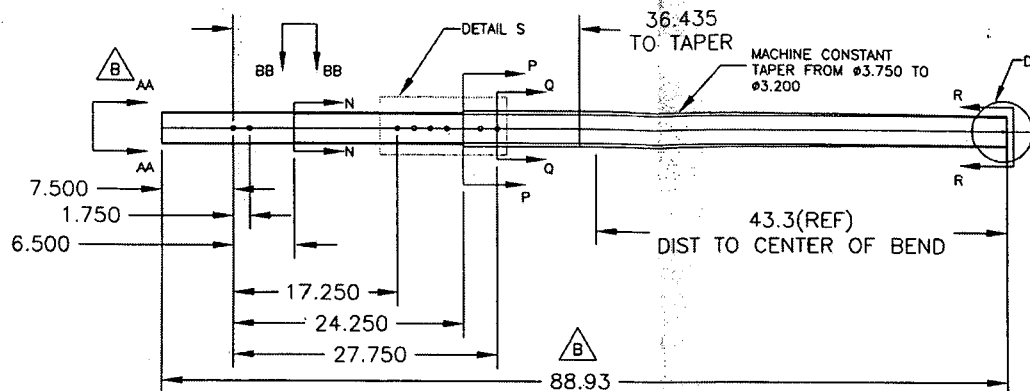
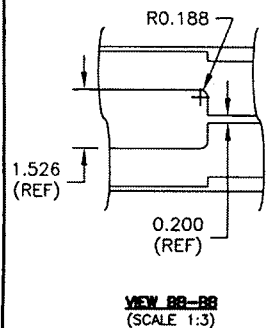
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TITLE			SCALE		
412 FLOAT SKIDTUBE			1:10		

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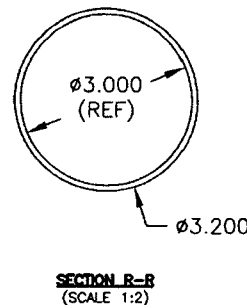
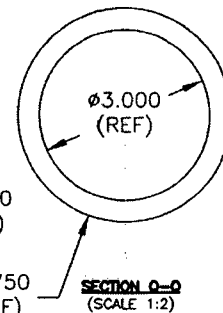
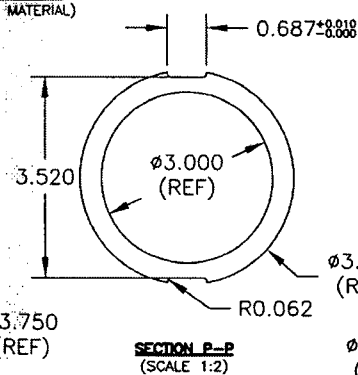
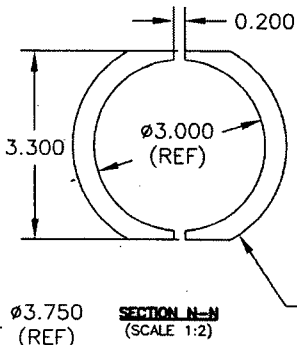
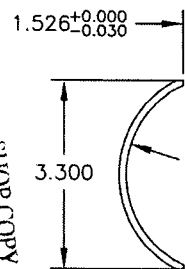
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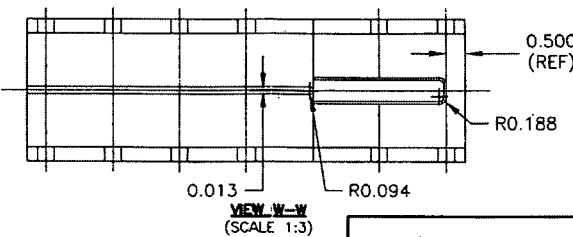
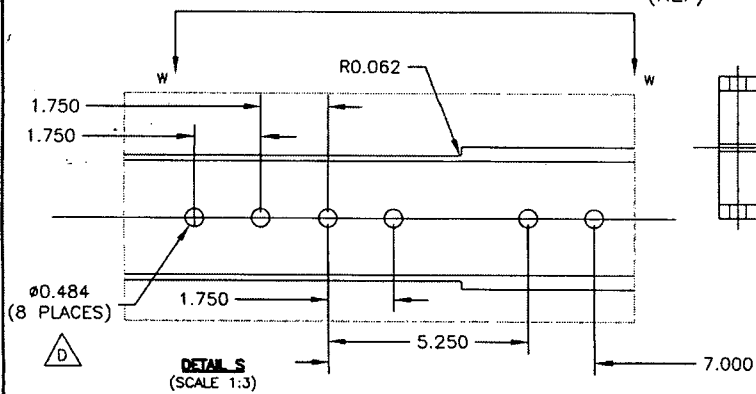
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06-01-27

D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



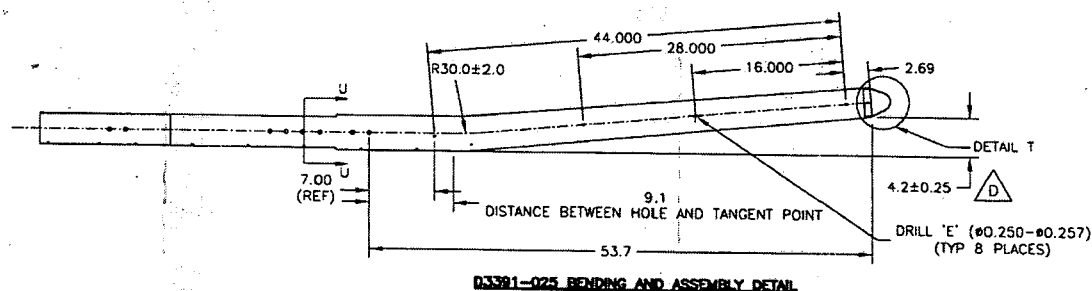
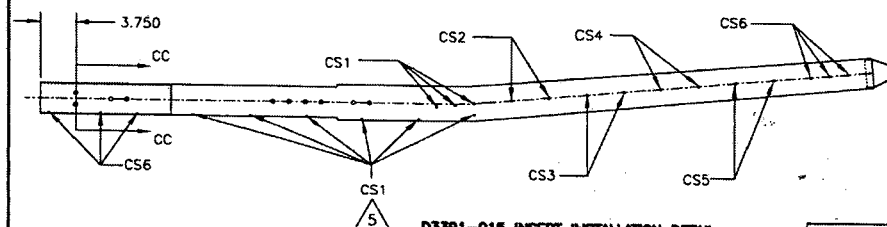
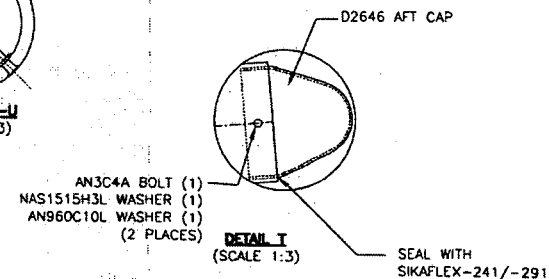
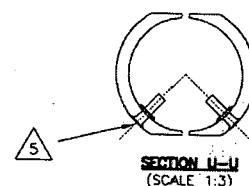
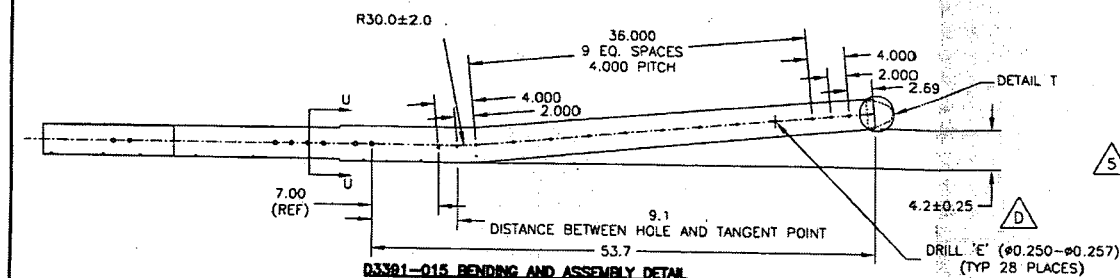
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PH		PH		PORT HADLOCK, MA	
CHECKED		APPROVED		DRAWING NO.	REV. D
DATE		DATE		D3391	SHEET 4 OF 5
06-01-23		06-01-23		TITLE	SCALE
				412 FLOAT SKIDTUBE	1:12

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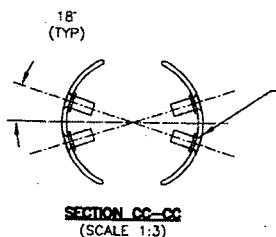


C'SINK AND INSTALL AESS10KBXXX AND/OR NAS1330C3KBXXX IN HOLES MARKED CS1-CS6 AS FOLLOWS

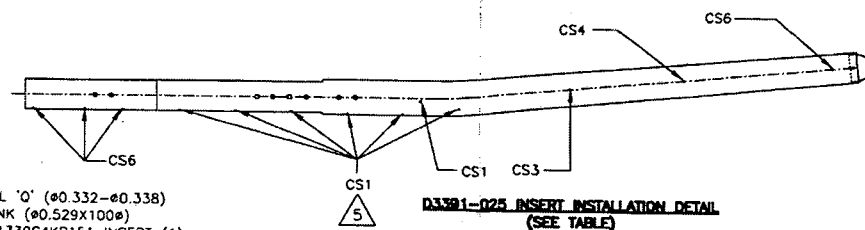
HOLES MARKED	QTY D3391-015	QTY D3391-025	C'SINK	P/N
CS1	18	14	Ø0.425	AESS10KB366
CS2	4		Ø0.391	AESS10KB366
CS3	4	2	Ø0.391	NAS1330C3KB316
CS4	4	2	Ø0.391	NAS1330C3KB266
CS5	4		Ø0.391	NAS1330C3KB216
CS6	12	8	Ø0.391	NAS1330C3KB166

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X		D3391-015	AFT TUBE ASSEMBLY
	X	D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
18	14	AESS10KB366	INSERT
4	2	NAS1330C3KB316	INSERT
4	2	NAS1330C3KB266	INSERT
4		NAS1330C3KB216	INSERT
12	8	NAS1330C3KB166	INSERT
4		NAS1330C4KB151	INSERT
2	2	AN3C4A	BOLT
2	2	NAS1515H3L	WASHER
2	2	AN960C10L	WASHER



DRILL 'O' (Ø0.332-Ø0.338)
C'SINK (Ø0.529X100°)
NAS1330C4KB151 INSERT (1)
(4 PLACES)



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DESIGN PH	DRAWN BY PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, OH
CHECKED [Signature]	APPROVED [Signature]	
DATE 06.01.23		DRAWING NO. D3391 TITLE 412 FLOAT SKIDTUBE REV. D SHEET 5 OF 5 SCALE 1:12

UNCONTROLLED COPY
RETURN TO
ENGINEERING
WITHOUT NOTICE
WORK ORDER
26581

WORK ORDER	
PART NUMBER	
Rev:	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☐ First Article ☐ Prototype

	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
14.000	±.01	14.000	✓			
3.500	±.01	3.495	✓			
88.93	±.03	88.93	✓			
3.200	±.01	3.203	✓			
R0.188"	±.010"	R0.188"				
1.526"	±.030"	1.526"				
.200"	±.010"	.205"				
7.500"	±.010"	7.498"				
1.750"	±.010"	1.745"				
6.500"	±.010"	—				
17.250"	±.010"	—				
24.250"	±.010"	—				
27.750"	±.010"	—				
36.435"	±.010"	—				
3.300"	±.010"	3.298"				
3.520"	±.010"	3.520"				
.687"	±.006"	.689"				
Ø.484"	±.006"	.486"				
5.250"	±.010"	5.250"				
R0.062"	±.010"	R0.062"				
R0.094"	±.010"	R0.094"				
.400	±.010"	.400"				

MOUSE	By: BG/JF	Audited by:	Prototype Approval:
	06.04.22	Date:	Date:
Rev	Change	Revised by	Approved
	1st Issue	KJ/RF	

200
250
41.450

42560
4440

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